

Appl. No. 09/673,185

REMARKS/ARGUMENTS

Claims 1-22 were originally filed in this application. Prior to the present paper, Claims 10-13 were canceled, and Claims 23 and 24 were added. Claims 1-9 and 14-24 have been rejected under various rejections. Claims 1 and 14 have been amended, above. Therefore, Claims 1-9 and 14-24 remain pending in this application and they are currently under consideration.

The amendments to Claims 1 and 14 are supported in the previous version of the claims.

Claims 1-4, 9, 14-17, and 20-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pietsch (DE 24 23 790) ("Pietsch") in view of Leutwyler et al (U.S. Pat. No. 5,911,712) ("Leutwyler"). Applicant respectfully traverses this rejection.

The present invention relates to a tampon formed of a rolled up web of absorbent material and having a removal cord having synthetic fibers looped around the web (Page 3, lines 10-12). The tampon is compressed in a manner that essentially pleats the web. (Figure 6.) The removal cord has an extensibility of greater than about 25 percent. (Page 5, lines 1-3.) This extensibility is sufficient to prevent damage to the cord during manufacture due to overstressing of the cord during compression of the tampon. (Page 7, lines 3-5.)

The present Office Action, page 2, indicates that Pietsch disclosed a tampon with a removal cord that is heat shrunk and that shrinking the removal cord keeps the cord from being damaged during further processing, as described on page 5, lines 4-10. Applicant respectfully submits that Pietsch discloses a tampon with a removal cord that is heat shrunk only after the tampon is formed and prior to packaging (i.e. further processing) with the removal cord being heat shrunk in order to place it in position for packaging of the tampon as described on page 11, lines 7-12. The tampon is preformed prior to heat shrinking of the string.

Applicant respectfully points out that the claimed invention is both novel and inventive over Pietsch.

Leutwyler discloses a digital tampon formed by winding up a length of continuous fiber web to form a blank. (Col. 5, lines 11-16.) Narrow strip portions of the circumferential surface of the blank are pressed radially to produce a preform having a center core and longitudinal ribs separated by outwardly open longitudinal grooves. (Col. 5, lines 16-26.) The preform is pressed into the final shape of a tampon having a rounded introduction end and a finger recess for the recovery end. (Col. 13, lines 35-38.)

In making the rejection, the Examiner points out that Col. 4, lines 5-19 discloses that the formation of the ribs 64 and longitudinal grooves 180 helps to prevent leakage. Paper 6 at 3. The

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Examiner then states that it would have been obvious to one of ordinary skill in the art at the time of the invention to construct the tampon of Pietsch with the rolled up, grooved configuration of Leutwyler, in order to reduce leakage. Paper 6 at 3.

While Leutwyler addresses tampon leakage among other matters, the purpose of the present invention relates to reducing removal cord damage during compression of the tampon. The Pietsch tampon has considerable heat insulating capabilities. The only portion of the recovery string that is heat-treated is that on the outside of the tampon. This heat treatment appears to occur after compression of the tampon.

Applicant respectfully submits that the combination of Pietsch with Leutwyler does not result in present invention, because it does not reduce the risk of removal cord damage during tampon compression. The tampon of Leutwyler also would insulate the recovery removal cord. Thus, it would not provide the benefit of the present invention.

In the present invention, the removal cord has an extensibility of greater than about 25 percent to prevent damage to the cord during manufacture. It possesses this extensibility throughout manufacture; it does not require post-formation heat treatment of the exterior portion of the removal cord as in Pietsch. The interior portion of the removal cord of Pietsch would be subject to damage in formation of the rolled and pleated structure of the tampon of Leutwyler. Leutwyler does not disclose that the cord have extensibility. Therefore the combination of Pietsch and Leutwyler does not result in the presently claimed invention.

Applicant respectfully requests reconsideration and withdrawal of this rejection.

With respect to the rejection of claims 23 and 24, the Examiner points out that the removal cord has an interior portion and an exterior portion, the interior portion being contained within the body of the tampon.

Applicant concurs and respectfully submits the novelty and inventiveness lies in the requirement that the interior portion of the removal cord of the present invention has extensibility of greater than about 25 percent to prevent damage to the cord during manufacture. The removal cord of Pietsch has extensibility only in the exterior portion. The non-heat treated interior portion of the the removal cord of Pietsch would be expected to have potential to be damaged during the compression portion of the tampon manufacturing process.

Reconsideration and withdrawal of rejection of claims 23 and 24 are respectfully requested.

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Claims 5-8, and 18-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pietsch in view of Leutwyler as applied above and further in view of Brown et al. (U.S. Patent No. 6,142,984) ("Brown"). Applicant respectfully traverses this rejection.

The present invention, Pietsch and Leutwyler are described above. Brown purports to disclose a textured tampon string. (Col. 2, line 25.) The textured string has more than one strand of yarn and may be crocheted, cabled or braided. (Col. 2, lines 34-36.) The textured string has more pronounced variations in diameter (and circumference) along its axial length than the simple twisted tampon string. (Col. 2, lines 50-53.) This variation provides an enhanced grippability of the string. (Col. 2, lines 57-60.) It is preferred that the string be constructed with a sufficiently tight crochet. (Col. 2, lines 66-67.) Loose stitches have greater elasticity that will facilitate elongation or distortion of the string and cause difficulty for the user during tampon removal. (Col. 3, lines 7-10.)

The textured tampon string is preferably attached directly to the tampon or pledget, or the coverstock of the pledget by methods known in the art. (Col. 3, lines 56-58.)

In making the rejection of Claims 5, 6, 11, 12, 18, and 19, the Examiner acknowledged that Pietsch fails to disclose the design of the texture. Paper 6 at 3.

To fill the acknowledged gap, the Examiner relied on Brown to disclose a removal cord having a texture, making the removal cord easier to grip. The Examiner further asserts that the removal cord of Brown may be textured by crocheting, which results in a helical texture or by braiding, which results in a zigzag texture. Paper 6 at 3.

The Examiner then asserts that it "would have been obvious to one having ordinary skill in the art at the time of the invention to construct the removal cord of Pietsch with the texture of Brown to allow for easier use of the tampon. Paper 6 at 3.

In rejecting claims 7 and 8, the Examiner acknowledged that Pietsch fails to disclose the number of cables and fibers in the removal cord. Paper 6 at 4.

To fill the acknowledged gap, the Examiner relied upon Brown to disclose a tampon comprising a removal cord constructed of two or more cables, the cables having 50 fibers, which results in a removal cord having a desirable denier, having substantial strength to withstand pulling during removal of the invention. Paper 6 at 4.

The Examiner then concluded that it would be obvious to one having ordinary skill in the art at the time of the invention to construct the removal cord of Pietsch with the number of cables and fibers taught by Brown, in order to have a substantially strong removal cord. Paper 6 at 4.

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As outlined above, it is respectfully submitted that the suggested combination of Pietsch and Leutwyler does not result in the invention of claim 1 and 14. The addition of Brown does not overcome this shortcoming.

Applicant respectfully points out that the textured removal cord of Brown is designed to make the removal cord easier to grip and be receptive to coatings, Col. 1, lines 43-52. Additionally, Brown teaches use of a textured tampon string in which the crocheted, cabled or braided strands of yarn are in tight substantially continuous contact with each other along the length of the tampon string, Col. 1, lines 63-67.

Brown teaches that "loose contact or stitches" are undesirable, because "[s]uch elongation or distortion causes difficulty for the user during removal", Col 3, lines 7-14. Therefore, Applicant respectfully submits that Brown teaches away from the present invention. Further, the addition of Brown in combination with Pietsch and Leutwyler does not result in the present invention, because the employing Brown's textured string that exhibits low elongation would not result in the present invention. Therefore, Applicant respectfully submits that this rejection is not proper, and it should be withdrawn.

Additionally, Claims 23 and 24 are directed to further differentiating the present invention from Pietsch. In particular, claim 23 further limits the removal cord as having two portions and that the interior portion of the removal cord located within the rolled up web has an extensibility of greater than about 25 percent to prevent damage to the interior portion of the cord during manufacture. Claim 24 also further limits the removal cord as having two portions and that the interior portion of the removal cord located within the rolled up web has a two-phase, tensile stress-strain curve having an inflection point between a first and a second phase to prevent damage to the interior portion of the cord during manufacture. It is the exterior portion of the removal string of Pietsch that is heat treated such that a clew is formed on the outside portion of the rear end of the preformed or finished tampon. Once the external clew is formed, the removal string does not interfere during further processing or when the tampon is packaged. This is different than the present invention of claims 23 and 24 define that it is important that the interior portion, not the exterior portion, of the removal cord be extensible in order to prevent damage during manufacture.

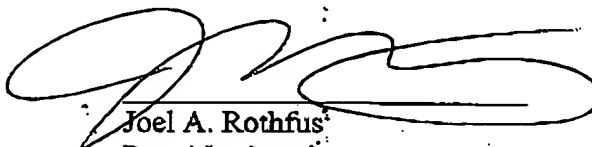
Based on the foregoing amendment and remarks, Applicant respectfully requests the withdrawal of the final rejection and reconsideration of the amended claims. Applicant believes this case is in condition for allowance and look forward to a favorable ruling as to the disposition of the claims.

Applicant believes that the foregoing presents a full and complete response to the outstanding Office Action. Should the Examiner have any questions regarding this submission, please contact the undersigned.

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Applicant respectfully requests a timely Notice of Allowance in this case.

Respectfully submitted,



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